

WHAT IS CLAIMED IS

1. An adhesive composition for application to skin, which comprises
- 5 an acrylic copolymer (100 parts by weight) obtained from a monomer mixture comprising a (meth)acrylic acid alkyl ester monomer (40-80 wt%), an alkoxy group-containing ethylenically unsaturated monomer (10-60 wt%) and a
- 10 carboxy group-containing ethylenically unsaturated monomer (1-10 wt%), and
- a carboxylic acid ester (20-120 parts by weight), which is liquid or paste at room temperature,
- wherein the acrylic copolymer has a gel fraction of 30-80 wt%.
- 15 2. The adhesive composition for application to skin according to claim 1, wherein the carboxylic acid ester is a glycerine ester of saturated fatty acid.
3. The adhesive composition for application to skin according
- 20 to claim 2, wherein the saturated fatty acid has 8 to 10 carbon atoms.
4. The adhesive composition for application to skin according to claim 3, wherein the saturated fatty acid having 8 to 10
- 25 carbon atoms is selected from the group consisting of a caprylic acid, a capric acid and a 2-ethylhexanoic acid.
5. The adhesive composition for application to skin according to claim 2, wherein the glycerine ester is a triglycerine
- 30 ester.
6. The adhesive composition for application to skin according to claim 2, wherein the glycerine ester of saturated fatty acid is selected from the group consisting of triglyceryl

caprylate, triglyceryl caprate and triglyceryl 2-ethylhexanoate.

7. The adhesive composition for application to skin according  
5 to claim 1, wherein the adhesive layer is chemically crosslinked.

8. The adhesive composition for application to skin according  
to claim 7, wherein the chemical crosslinking is performed  
10 using an organic compound selected from the group consisting of an organic peroxide, an isocyanate compound, an epoxy compound and a metal chelate compound.

9. An adhesive composition for application to skin comprising  
15 an acrylic copolymer (100 parts by weight) obtained from a monomer mixture comprising a (meth)acrylic acid alkyl ester monomer (40-80 wt%), an alkoxy group-containing ethylenically unsaturated monomer (10-60 wt%) and a  
20 carboxy group-containing ethylenically unsaturated monomer (1-10 wt%) and  
a carboxylic acid ester (20-120 parts by weight), which is liquid or paste at room temperature,  
wherein the acrylic copolymer has a gel fraction of 20-60 wt%.

25 10. The adhesive composition for application to skin according to claim 9, wherein the carboxylic acid ester is a glycerine ester of saturated fatty acid.

11. The adhesive composition for application to skin according  
30 to claim 10, wherein the saturated fatty acid has 8 to 10 carbon atoms.

12. The adhesive composition for application to skin according to claim 11, wherein the saturated fatty acid having 8 to 10

carbon atoms is selected from the group consisting of a caprylic acid, a capric acid and a 2-ethylhexanoic acid.

13. The adhesive composition for application to skin according  
5 to claim 10, wherein the glycerine ester is a triglycerine ester.

14. The adhesive composition for application to skin according  
to claim 10, wherein the glycerine ester of saturated fatty  
10 acid is selected from the group consisting of triglyceryl caprylate, triglyceryl caprate and triglyceryl 2-ethylhexanoate.

15. The adhesive composition for application to skin according  
15 to claim 9, wherein the adhesive layer is chemically crosslinked.

16. The adhesive composition for application to skin according  
to claim 15, wherein the chemical crosslinking is performed  
20 using an organic compound selected from the group consisting of an organic peroxide, an isocyanate compound, an epoxy compound and a metal chelate compound.

17. An adhesive tape or sheet for application to skin  
25 comprising the adhesive composition of claim 1, which is formed in a layer directly or indirectly on at least one surface of a substrate.

18. The adhesive tape or sheet for application to skin  
30 according to claim 17, wherein the substrate is moisture permeable.

19. The adhesive tape or sheet for application to skin  
according to claim 18, which has a water vapor permeability of

the entire tape of sheet of  $300-2400 \text{ g/m}^2 \cdot 24\text{h} \cdot 40^\circ\text{C} \cdot 30\% \text{ R.H.}$

20. An adhesive tape or sheet for application to skin comprising the adhesive composition of claim 9, which is  
5 formed in a layer directly or indirectly on at least one surface of a substrate.

21. The adhesive tape or sheet for application to skin according to claim 20, wherein the substrate is moisture  
10 permeable.

22. The adhesive tape or sheet for application to skin according to claim 21, which has a water vapor permeability of the entire tape or sheet of  $300-2400 \text{ g/m}^2 \cdot 24\text{h} \cdot 40^\circ\text{C} \cdot 30\% \text{ R.H.}$   
15

23. An adhesive tape or sheet for application to skin obtained by subjecting an adhesive tape or sheet for application to skin, which comprises the adhesive composition of claim 9 formed in a layer directly or indirectly on at least one  
20 surface of a substrate, to ionization irradiation to increase and adjust the gel fraction of the acrylic copolymer in the adhesive layer to 30-80 wt% after irradiation.

24. The adhesive tape or sheet for application to skin  
25 according to claim 23, wherein the substrate is moisture permeable.

25. The adhesive tape or sheet for application to skin according to claim 24, which has a water vapor permeability of  
30 the entire tape or sheet of  $300-2400 \text{ g/m}^2 \cdot 24\text{h} \cdot 40^\circ\text{C} \cdot 30\% \text{ R.H.}$

26. A method for producing an adhesive tape or sheet for application to skin, which method comprises the steps of  
a) obtaining an adhesive tape or sheet for application to skin

by directly or indirectly forming a layer of the adhesive composition for application to skin of claim 9 on at least one surface of a substrate, and

- b) subjecting the adhesive tape or sheet to ionization
- 5 irradiation to increase and adjust the gel fraction of the acrylic copolymer in the adhesive layer to 30-80 wt% after irradiation.